

AMENDMENT TO THE CLAIMS

The listing of claims below will replace all prior versions, and listings, of the claims in the application.

Claims 1 – 74 (cancelled).

Claim 75 (previously presented): An isolated polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 38 and SEQ ID NO:42.

Claim 76 (previously presented): An isolated polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of Cys⁴⁴ through Cys³⁸⁹ of SEQ ID NO:38 and Cys⁴¹ through Cys³³⁷ of SEQ ID NO:42, wherein said protein is capable of binding to a glial cell line-derived neurotrophic factor or a neurturin neurotrophic factor such that the resulting protein/neurotrophic factor complex can bind to and induce phosphorylation of ret receptor protein tyrosine kinase.

Claim 77 (previously presented): An isolated polynucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of:

- a) nucleotides of SEQ ID NO:37 encoding SEQ ID NO:38, and
- b) nucleotides of SEQ ID NO:41 encoding SEQ ID NO:42.

Claim 78 (previously presented): A vector comprising a polynucleic acid molecule of claim 75, 76 or 77 operatively linked to one or more operational elements effecting the amplification or expression of said polynucleic acid molecule.

Claim 79 (previously presented): A vector comprising a polynucleic acid molecule encoding a protein comprising the amino acid sequence of SEQ ID NOs: 38 or 42 operatively linked to one or more operational elements effecting the amplification or expression of said polynucleic acid

molecule, wherein said protein is capable of binding to a neurotrophic factor such that the resulting protein/neurotrophic factor complex can bind to and induce phosphorylation of ret receptor protein tyrosine kinase.

Claim 80 (previously presented): An isolated host cell comprising a vector of claim 78.

Claim 81 (previously presented): An isolated host cell comprising a vector of claim 79.

Claim 82 (previously presented): An isolated host cell comprising a vector of claim 78 wherein said host cell is selected from the group consisting of a mammalian cell and a bacterial cell.

Claim 83 (previously presented): A host cell of claim 82 which is a COS-7 cell or E. coli.

Claim 84 (previously presented): A method for the production of a neurotrophic factor receptor protein, said method comprising the steps of:

(a) culturing an isolated host cell, containing a polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of
(i) SEQ ID NO:38, and
(ii) SEQ ID NO:42,

under conditions suitable for the expression of said neurotrophic factor receptor protein by said host cell; and

(b) optionally, isolating said neurotrophic factor receptor protein expressed by said host cell.

Claim 85 - 86 (cancelled).

Claim 87 (previously presented): A method for the production of a neurotrophic factor receptor protein comprising the steps of:

(a) culturing an isolated host cell containing a polynucleic acid molecule of claim 75, 76 or 77 under conditions suitable for the expression of said neurotrophic factor receptor protein by said host cell; and

(b) optionally, isolating said neurotrophic factor receptor protein expressed by said host cell.